IN THE CLAIMS

1-31 (Canceled)

32. (Original) A method for fabricating an infrared optical element from a wafer of material capable of transmitting infrared radiation therethrough, comprising, in the order listed:

masking a surface of the wafer with a pattern defining a cross section of a field of posts;

etching the wafer surface so as to form the field of posts to a desired depth;

masking the field of posts with a shape defining a cavity in the surface of the wafer;

etching the wafer surface including the field of posts so as to form a cavity in the wafer.

33. (Original) The method of claim 32 where the second etching operation is performed such that the tops of the posts lie below the surface of the cavity.

34. (Original) The method of claim 32 where the second etching operation is performed such that tops of the posts are approximately flush with a bottom surface of the cavity.

35. (Original) The method of claim 32 where the second etching operation is performed such that bottoms of the posts lie below a bottom surface of the cavity.

36. (Original) The method of claim 32 where the cross section of the posts varies along their height.

37. (Original) The method of claim 36 where the cross section decreases along the height.

38. (Original) The method of claim 32 where the first etching operation is a reactive ion etch.

39. (Original) The method of claim 38 where the second etching operation is a reactive ion etch.

40. (Original) The method of claim 32 where the height of the posts after the second etching operation is in the approximate range of 0.5μm to 4μm.

41. (Original) The method of claim 32 further comprising applying an antireflection layer to a side of the wafer opposite the cavity.

42. (Original) The method of claim 32 further comprising mounting an infrared detector to the wafer so as to receive incident infrared radiation through the wafer.

43. (Original) The method of claim 42 where the infrared detector is an array of bolometer pixels.

44. (Original) The method of claim 42 further comprising mounting the detector to the wafer.

45. (Original) The method of claim 44 wherein the detector is hermetically sealed to the wafer.

46. (Original) The method of claim 44 further comprising evacuating the cavity.

47. (Original) A method for fabricating an infrared optical device, comprising:

masking a surface of awafer of material capable of transmitting infrared radiation therethrough with a pattern defining a field of posts;

etching the wafer surface so as to form the field of posts to a desired height;

applying an antireflection element to the other surace of the wafer;

sealing the wafer to a substrate containing an array of bolometers.

48. (Original) The method of claim 47 further comprising evacuating a space between the wafer and the substrate.

49. (Original) The method of claim 47 where the posts have varying cross section along their height.

50. (Original) The method of claim 47 further comprising:

performing the above operations for a plurality of infrared optical devices on the same wafer;

dicing the wafer after sealing it to the substrate containing multiple arrays of bolometrs;

thereafter, dicing the wafer and the substrate to separate individual ones of the devices.

CONCLUSION

Claims 1-31 are canceled. Claims 32-50 are therefore pending. The Examiner is invited to contact the below-signed attorney with any questions regarding the present Application.

Respectfully Submitted,

BARRETT E. COLE

By his Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 373-6971

Date 28 July 2003 By _____
J.M. Anglin
Reg. No. 24,916

"Express Mail" mailing label number: EV332569675US
Date of Deposit: July 28, 2003
This paper or fee is being deposited on the date indicated above with the United States Postal Service pursuant to 37 CFR 1.10, and is addressed to The Commissioner for Patents, Mail Stop Patent Application, P.O.Box 1450, Alexandria, VA 22313-1450.